an antibody or antiserum elicited by a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

6. The recombinant protein of claim 4 or 5 wherein said protein is expressed from a host transformed with a DNA vector into which cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2 is incorporated.

7. Lysogenic bacteria with recombinant phage expressing a 48kDa protein of rhoptry of *Babesia caballi* merozoite, which is prepared by infecting *E. coli* with phage into which cDNA having the nucleotide sequence encoding the amino acid sequence shown in SEQ ID NO: 2 is incorporated.

8. An antibody capable of binding to a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

9. The antibody of claim 8 wherein said protein is a naturally occurring protein or a recombinant protein.

10. The antibody of claim 8 or 9 wherein said antibody is a monoclonal antibody.

11. An antigen comprising the recombinant protein from merozoite of *Babesia caballi* as set forth in any of claims 4 to 6.

12. A method for diagnosing equine babesiasis which comprises specifically detecting anti-*Babesia caballi* antibody present in equine blood by using the antigen as

set forth in claim 11.

13. A method for diagnosing equine babesiasis which comprises detecting the presence of *Babesia caballi* merozoite in equine blood by using the antibody capable specifically binding to a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

ABSTRACT

The present invention provides a gene encoding a protein from merozoite of *Babesia caballi*, a recombinant protein of *Babesia caballi*, and an antibody capable specifically binding to a 48kDa protein of rhoptry of *Babesia caballi* merozoite. In accordance with the present invention, it is possible to stably prepare the 48kDa protein of rhoptry of *Babesia caballi* and the gene encoding said protein in a large amount with the recombinant DNA technique. The present invention also provides a method for diagnosing equine babesiasis which comprises either specifically detecting anti-*Babesia caballi* antibody present in equine blood by using the recombinant protein of present invention as an antigen or detecting the presence of *Babesia caballi* merozoite in equine blood by using the antibody of the present invention.